

PROPOSED AMENDMENTS TO THE CLAIMS

5. *(currently amended)* A cover gas composition adapted for the protection of molten magnesium/magnesium alloy, the composition [~~including~~] **consisting of an effective amount of** up to less than 1% by volume of a fluorine containing inhibiting agent selected from the group consisting of

5 difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, hydrofluoroethers and mixtures thereof, and a carrier gas, wherein each component of the composition has a Global Warming Potential (GWP) (referenced to the absolute GWP for carbon dioxide at a time horizon of 100

10 years) of less than 5000.

10. *(currently amended)* A cover gas composition adapted for the protection of molten magnesium/magnesium alloy, the composition [~~including~~] **consisting of an effective amount of** a fluorine containing inhibiting agent selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1,

5 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, methoxy-nonafluorobutane, ethoxy-nonafluorobutane, dihydrodecafluoropentane and mixtures thereof, wherein said inhibiting agent is up to less than 1% by volume of the composition, and a carrier gas, wherein each component of the composition has a Global Warming Potential (GWP) (referenced to the absolute

10 GWP for carbon dioxide at a time horizon of 100 years) of less than 5000.

34. (*currently amended*) A method of protecting molten magnesium/magnesium alloy, comprising blanketing the magnesium/magnesium alloy with a cover gas composition [~~containing~~ consisting of an effective amount of up to less than 1% by volume of a fluorine
- 5 containing inhibiting agent selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, hydrofluoroethers, and mixtures thereof, and a carrier gas, wherein each component of the composition has a Global Warming Potential (GWP)
- 10 (referenced to the absolute GWP for carbon dioxide at a time horizon of 100 years) of less than 5000.

39. (*currently amended*) A method as claimed in claim [37] 34, wherein the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane.

44. (*currently amended*) A method for protecting an exposed surface of molten magnesium/magnesium alloy from reacting with oxygen in air, comprising:

- (a) providing molten magnesium/magnesium alloy;
- 5 (b) contacting said molten magnesium/magnesium alloy with a gaseous mixture [~~including~~ consisting of an effective amount of up to less

than 1% by volume of a fluorine containing inhibiting agent selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane,
10 hydrofluoroethers, and mixtures thereof; and

(c) forming a protective film/layer on the surface of said molten magnesium/magnesium alloy.